

The discrepancy between high pathological complete response (pCR) rate and low breast conserving surgery (BCS) following neoadjuvant therapy: analysis from the NeoALTTO trial (BIG 1-06)

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on behalf of the Neo-ALTTO Study Team
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Disclosure slide

- I have no conflicts of interest to declare

**Neoadjuvant
therapy**

**Test sensitivity
to systemic
therapy**

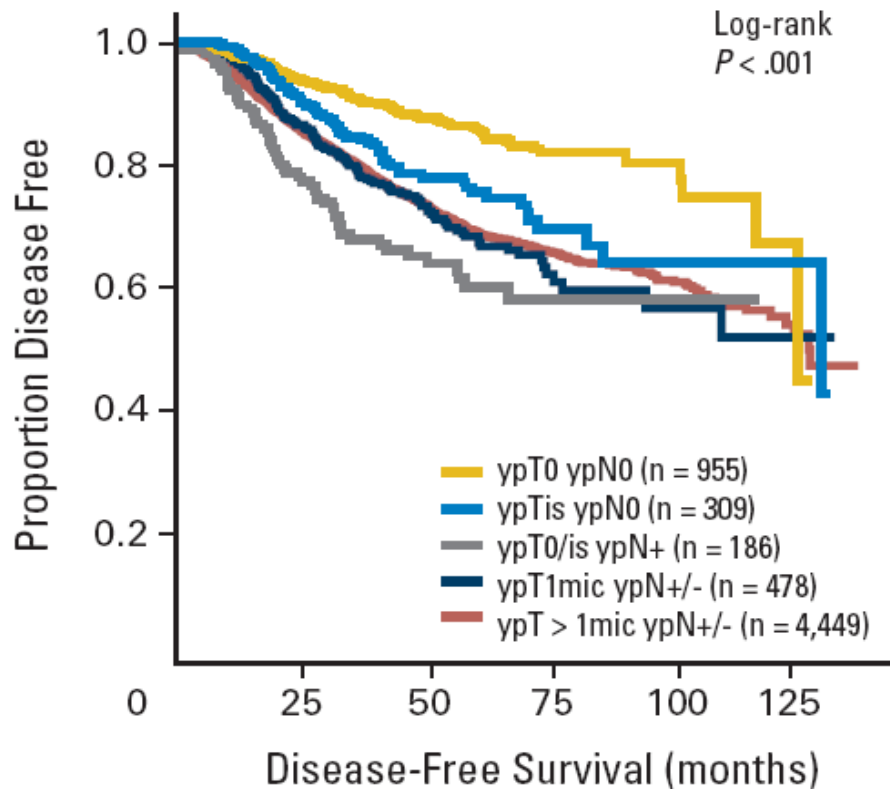
**Down staging of
locally-
advanced
disease**

**Increase breast
conservation
rates**

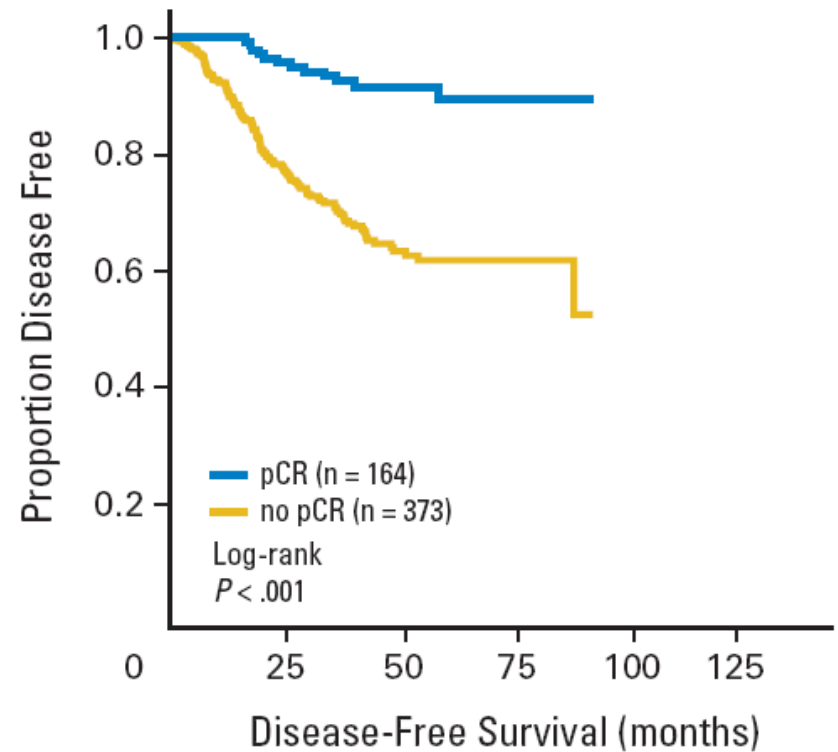
**Elimination
of
micro-metastasis**

pCR is an early read-out of long-term outcome

All Patients



HER2+ BC



Recommendations From an International Expert Panel on the Use of Neoadjuvant (Primary) Systemic Treatment of Operable Breast Cancer: An Update

Manfred Kaufmann, Gabriel N. Hortobagyi, Aron Goldhirsch, Suzy Scholl, Andreas Makris, Pinuccia Valagussa, Jens-Uwe Blohmer, Wolfgang Eiermann, Raimund Jackesz, Walter Jonat, Annette Lebeau, Sibylle Loibl, William Miller, Sigfried Seeber, Vladimir Semiglazov, Roy Smith, Rainer Souchoy, Vered Stearns, Michael Untch, and Gunter von Minckwitz

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ORIGINAL REPORT

Breast Conservation After Neoadjuvant Chemotherapy: The M.D. Anderson Cancer Center Experience

Allen M. Chen, Paula Marie-Bersanian, Kelly E. Hunt, Howard D. Thorne, Mary Jane Oswald, Ellyssa D. Quillen, Eric A. Strom, Marsha D. McNiece, Henry M. Kuerer, Merrick J. Ross, S. Eva Singletary, Frederick C. Ames, Barry W. Fry, Araceli A. Salas, George H. Perkins, Naomi R. Schneider, Gabriel N. Hortobagyi, and Thomas A. Buchholz

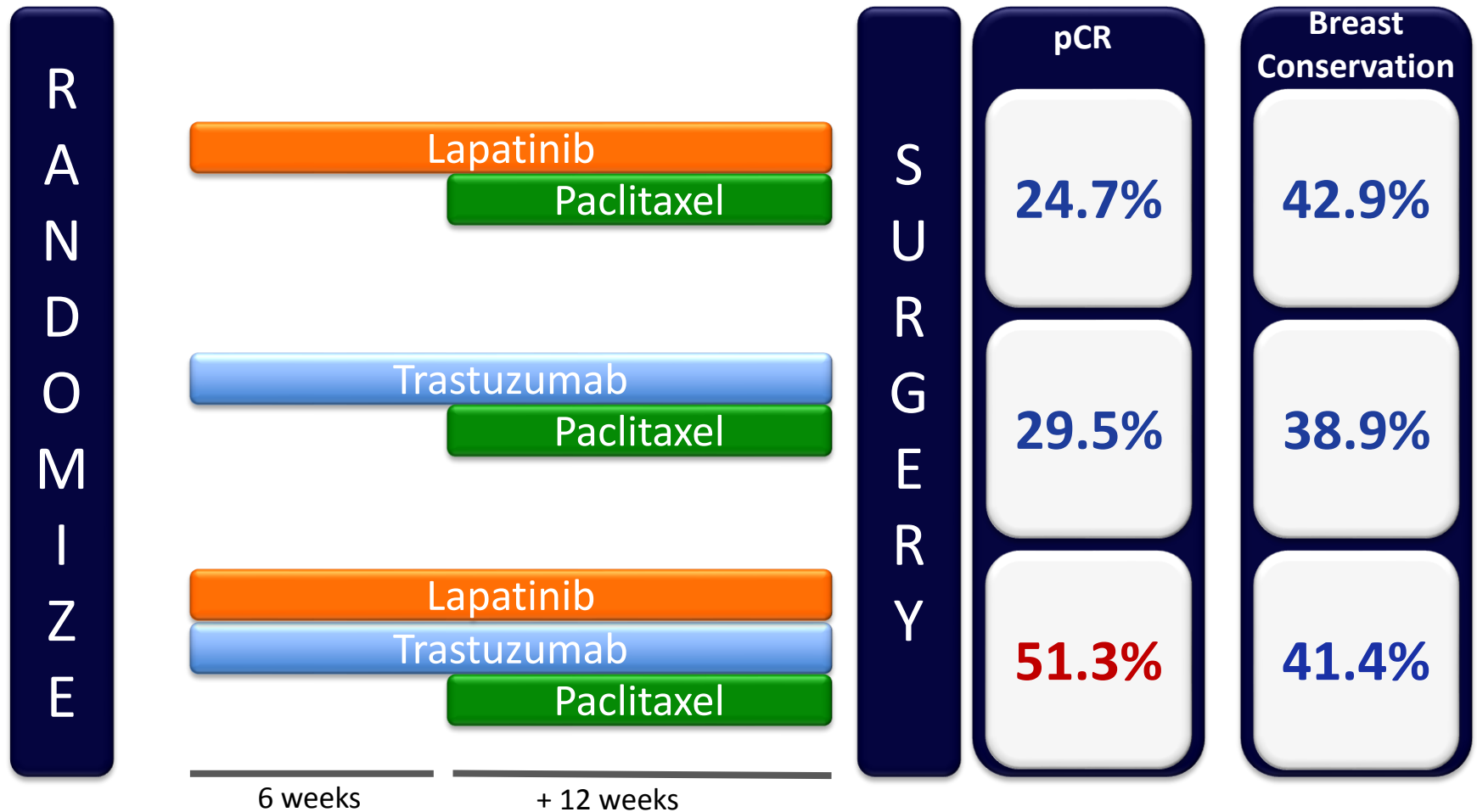
J Natl Cancer Inst Monogr 2011;43:147–151

International Expert Consensus on Primary Systemic Therapy in the Management of Early Breast Cancer: Highlights of the Fourth Symposium on Primary Systemic Therapy in the Management of Operable Breast Cancer, Cremona, Italy (2010)

Alfredo Berruti, Daniele Generali, Manfred Kaufmann, Lajos Pusztai, Giuseppe Curigliano, Massimo Aglietta, Luca Gianni, William R. Miller, Michael Untch, Christos Sotiriou, Mariagrazia Daidone, PierFranco Conte, Derek Kennedy, Giovanna Damia, Piergiorgio Petronini, Serena Di Cosimo, Paolo Bruzzi, Mitch Dowsett, Christine Desmedt, Robert E. Mansel, Lucio Olivetti, Carlo Tondini, Anna Sapino, Privato Fenaroli, Gianpaolo Tortora, Hather Thorne, Francesco Bertolini, Francesco Ferrozzi, Marco Danova, Elda Tagliabue, Evandro de Azambuja, Andreas Makris, Marco Tampellini, Gabriela Dontu, Laura Van't Veer, Adrian L. Harris, Stephen B. Fox, Luigi Dogliotti, Alberto Bottini

“The rate of breast conserving surgery should increase in patients with complete or partial clinical response”

THE Neo-ALTTO TRIAL



OBJECTIVE

To investigate the different factors that
affected the choice of surgery
in patients enrolled in the Neo-ALTTO trial

FACTORS EXAMINED

- Age
- Multicentricity/Multifocality
- Planned surgery at diagnosis
- Physical examination before surgery
- Imaging before surgery
- Tumor characteristics
- Geographic region

METHODS

- The analysis was performed on patients enrolled in the NeoALTTO trial, comparing the results across the treatment arms whenever possible.
- The prevalence of the different clinicopathologic (C/P) factors was compared between patients subjected and not subjected to breast conserving surgery (BCS).
- A logistic regression model relating the probability of BCS to the candidate predictors and treatment arm was performed, to discover
 - Whether any of the C/P factors is usefully predictive of BCS
 - Whether adjustment for these predictors changes the apparent relationship between treatment arm and BCS.

RESULTS

Patient Population

Neo-ALTTO Study
N = 455 patients in 23 countries

N = 26 patients excluded
(surgery not done)

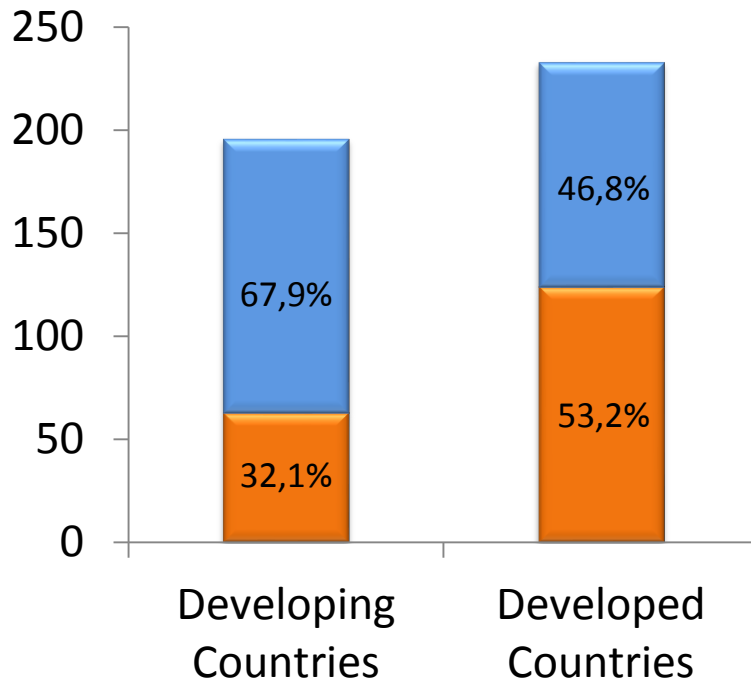
Sub-study
N = 429 evaluable patients

Baseline Characteristics

■ not BCS ■ BCS

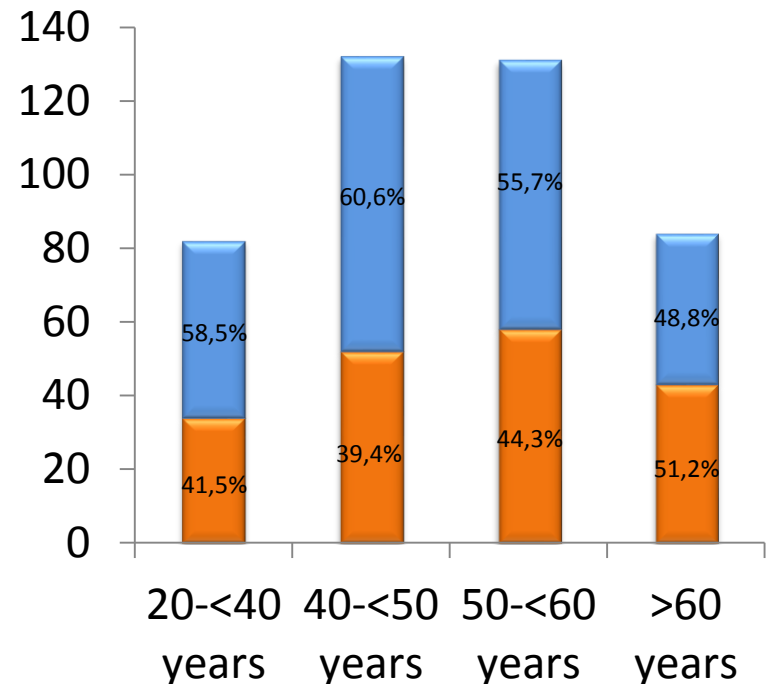
Geographics*

p=0.006



Age

p=0.2

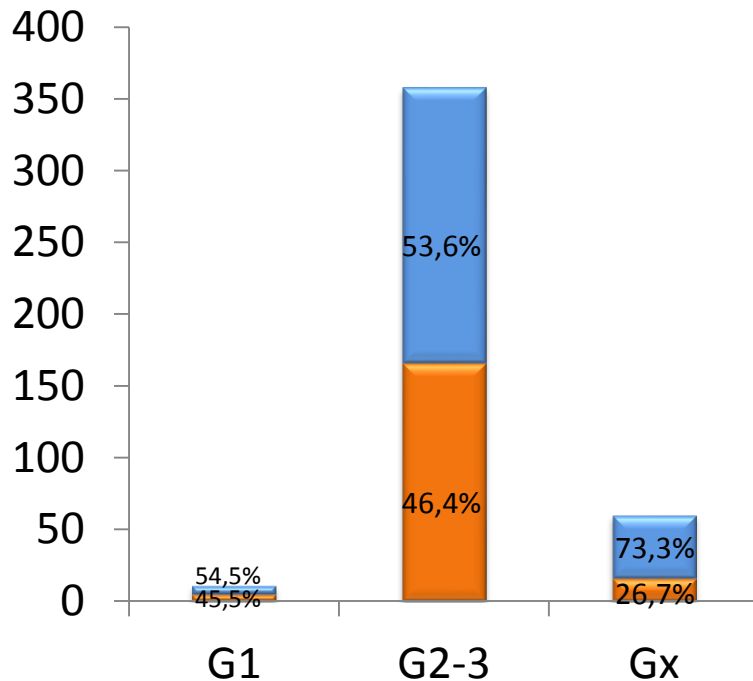


Baseline Characteristics

■ not BCS ■ BCS

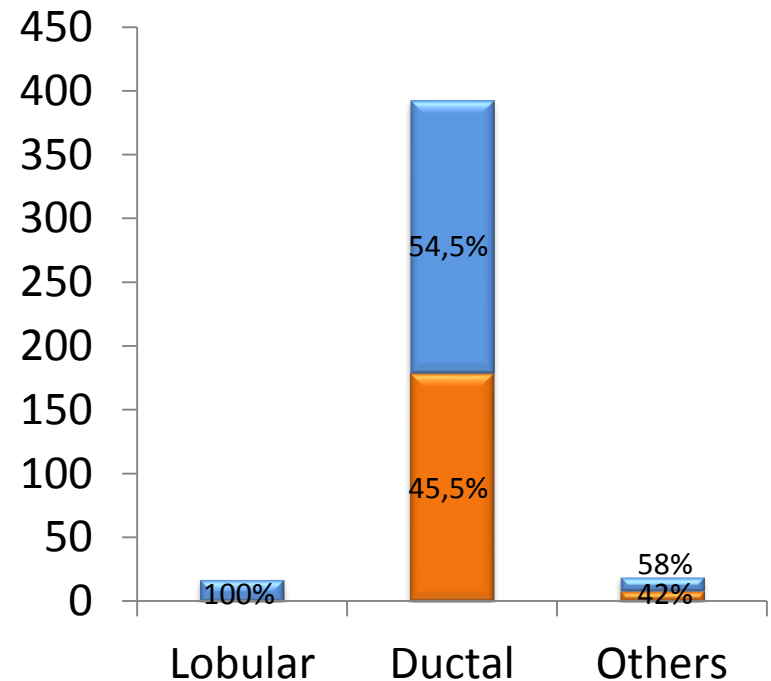
Histological Grade

$p=0.1$



Histological type*

$p=0.4$

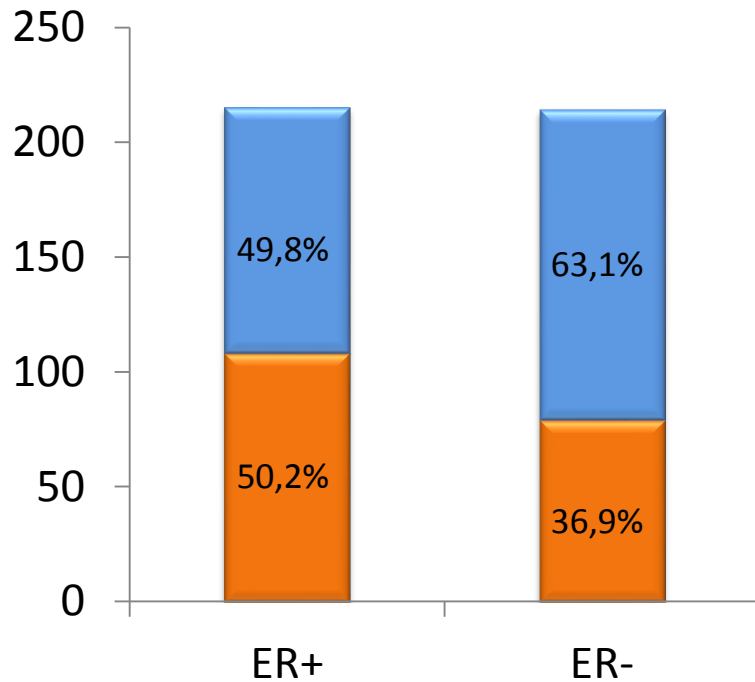


Baseline Characteristics

■ not BCS ■ BCS

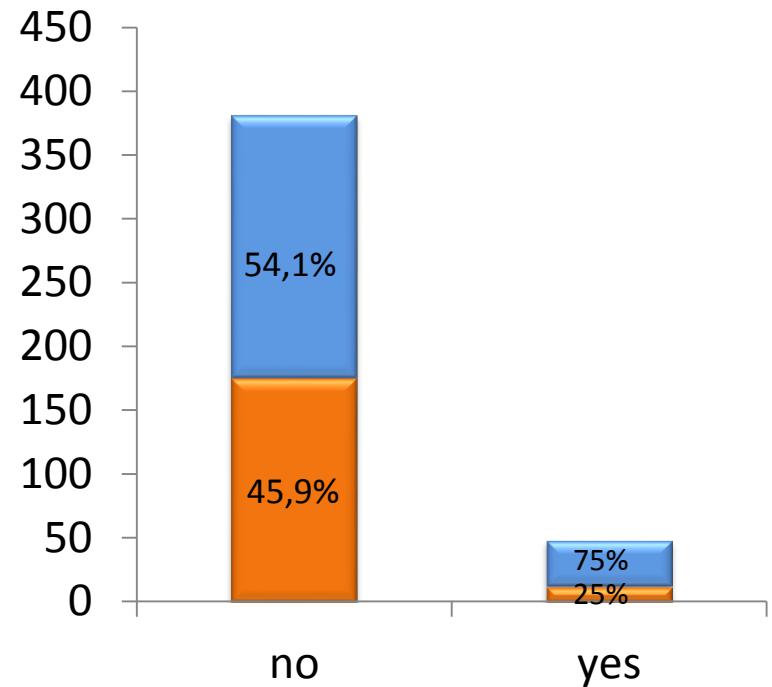
ER status

$p=0.002$



Multicentricity/focality

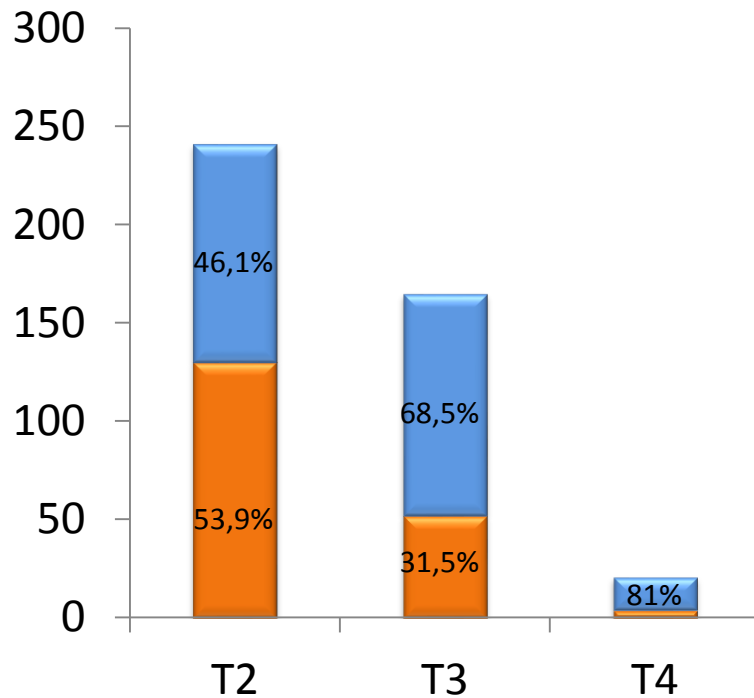
$p<0.0001$



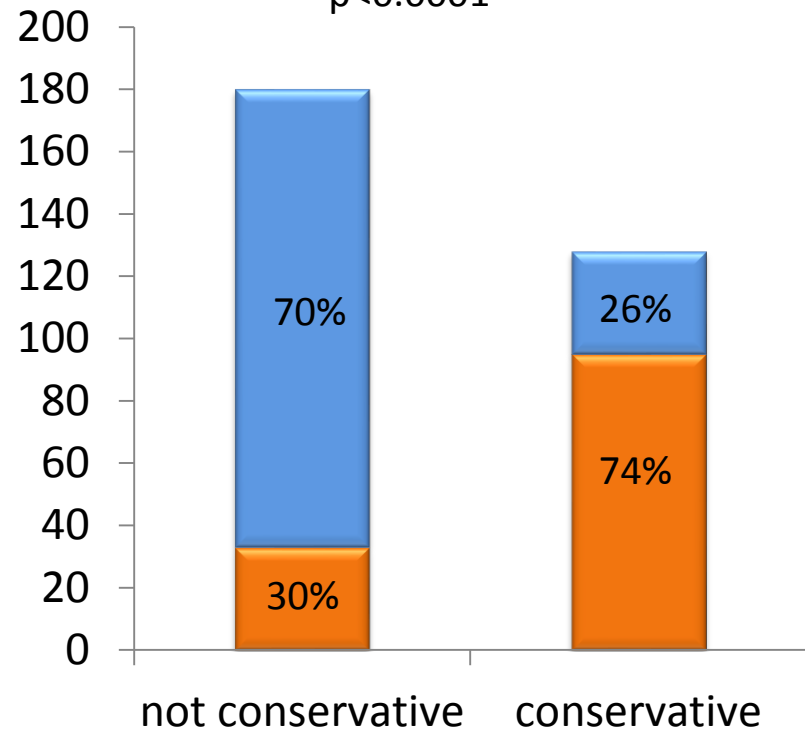
Baseline Characteristics

■ not BCS ■ BCS

Size
 $p=0.0004$



Planned surgery
 $p<0.0001$

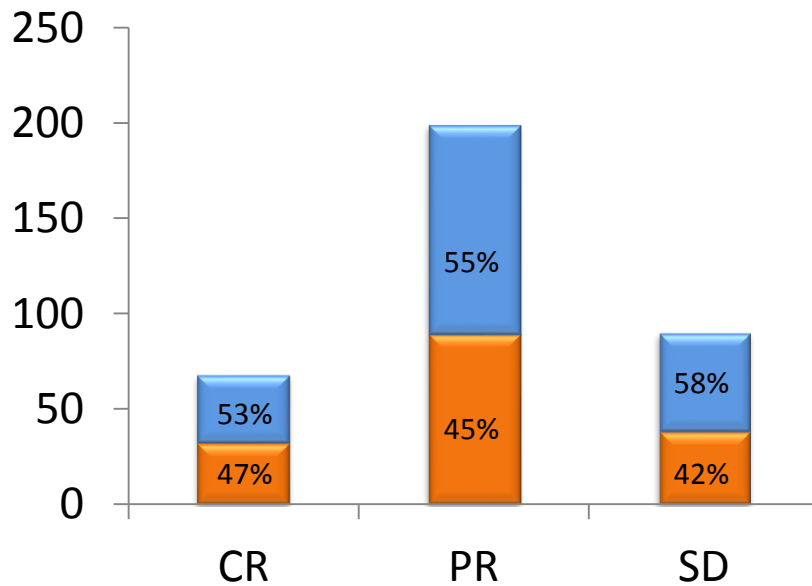


Post Baseline Characteristics

■ not BCS ■ BCS

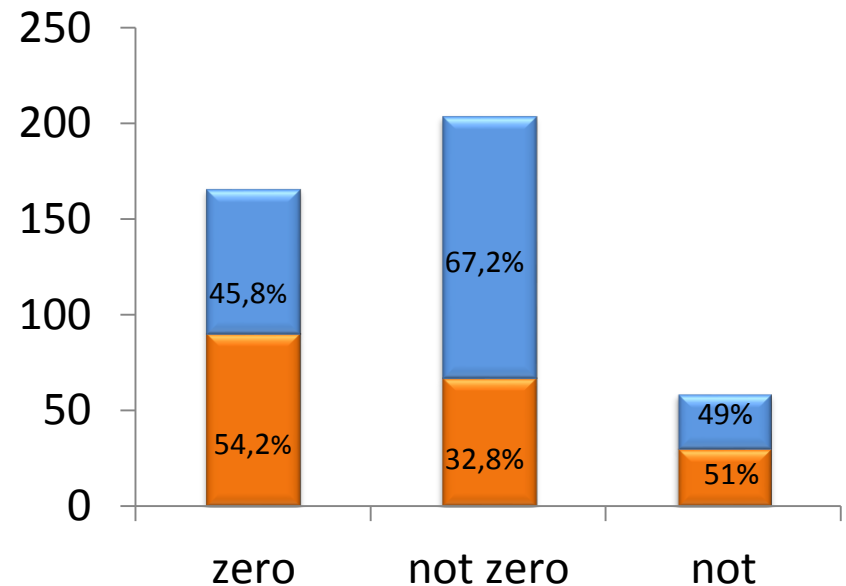
**Tumor measurement
by radiology
at pre-surgery visit**

$p=0.87$



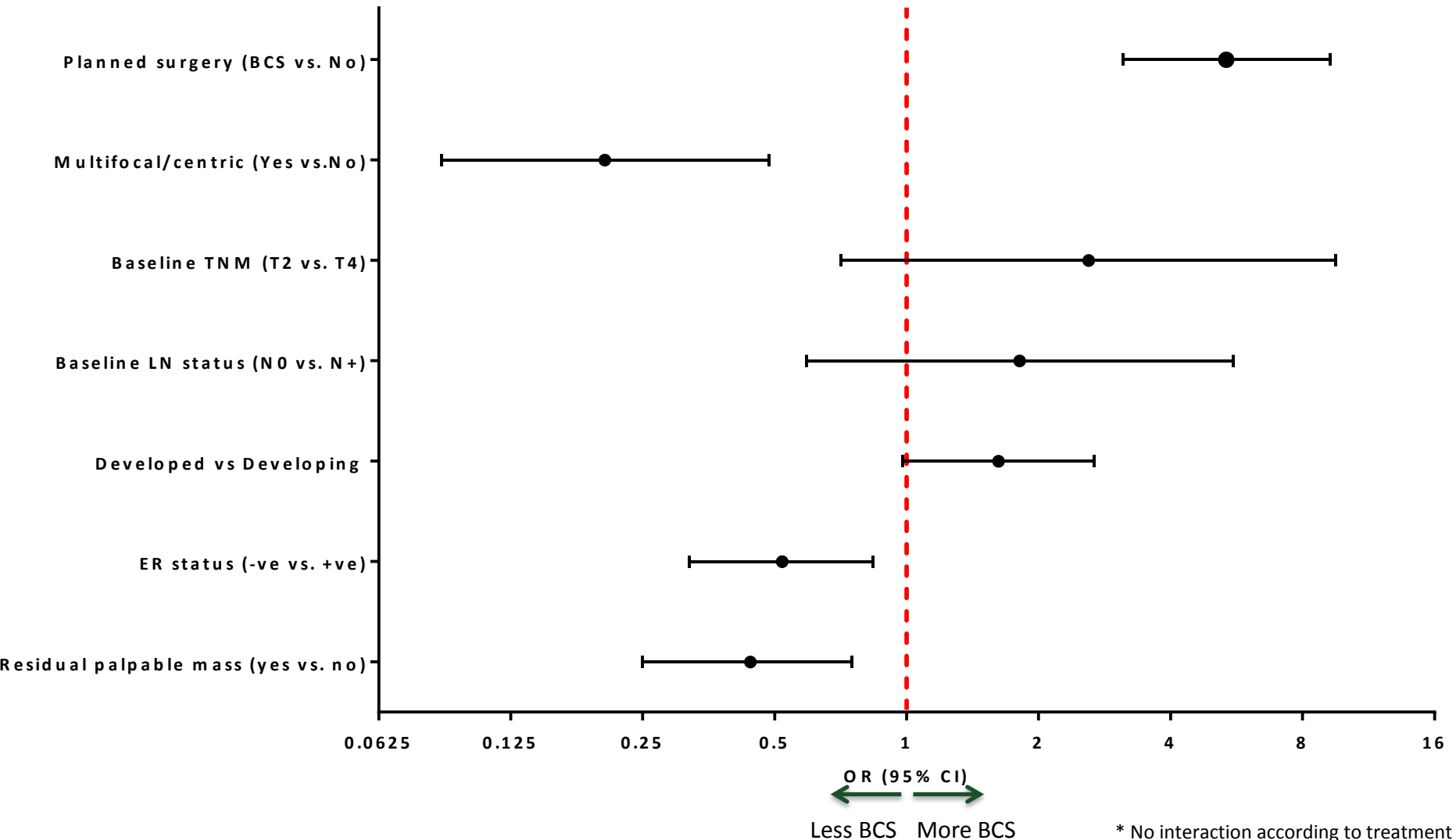
**Tumor measurement
by breast palpation
at pre-surgery visit**

$p=0.0004$



Factors Affecting the Decision for Breast Conservation After Neoadjuvant Therapy

Adjusted Logistic Regression Model (Including planned surgery at baseline) *

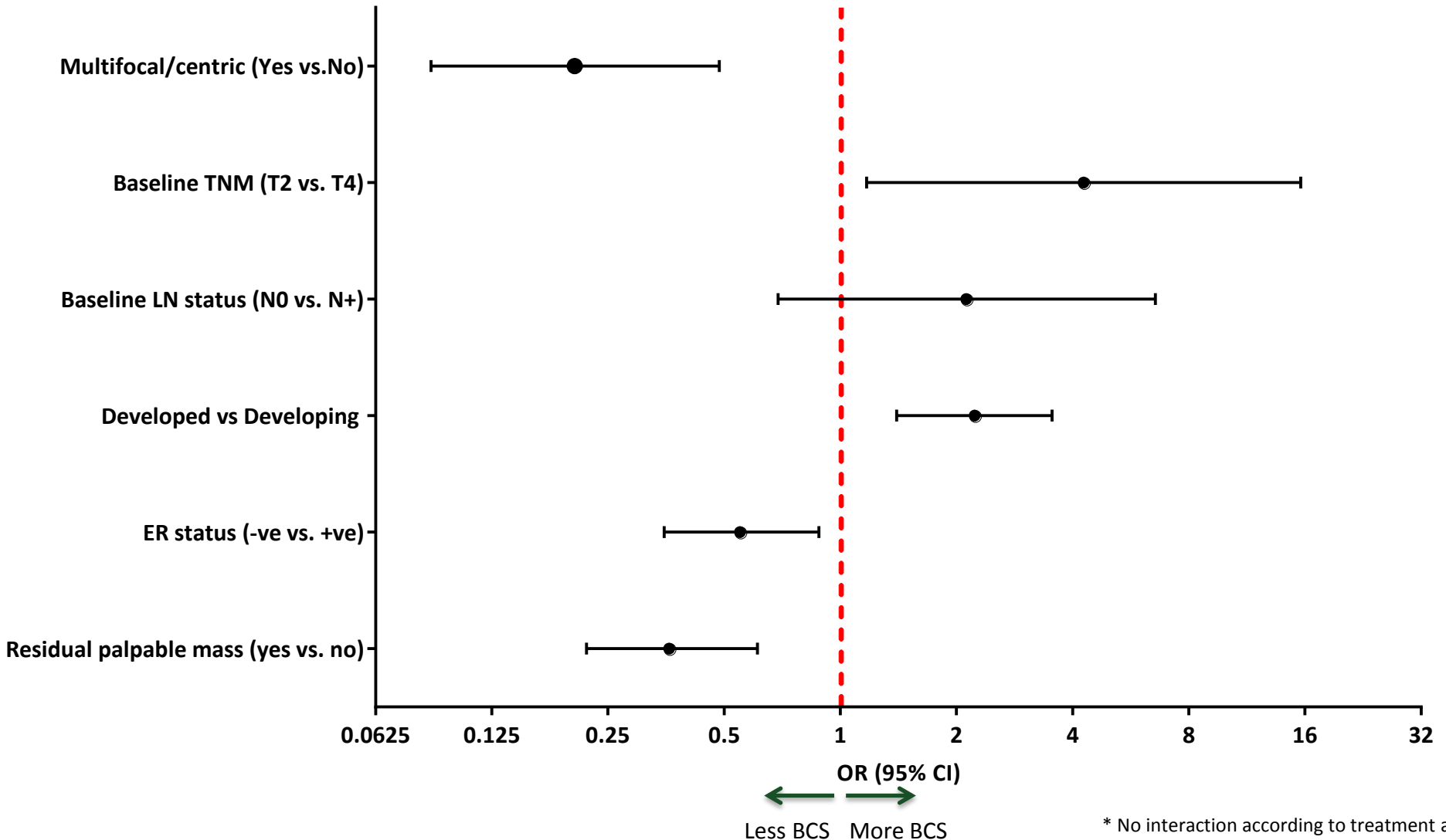


* No interaction according to treatment arm

The analysis was also adjusted for age, histological grade, response to treatment, completion of therapy

Factors Affecting the Decision for Breast Conservation After Neoadjuvant Therapy

Adjusted Logistic Regression Model (Excluding planned surgery at baseline) *



Conclusions

Our study suggests that the decision of surgical treatment post neoadjuvant therapy is mainly based on baseline characteristics. This was observed independent of the treatment arm and response to treatment. These factors were:

- Type of planned surgery at diagnosis
- Multicentricity/Multifocality of the tumor
- Receptor status (ER-negative less likely to receive BCS)

Conclusions

- Several factors were independently associated with the type of planned surgery at diagnosis
 - Geographic region (less BCS in developing countries)
 - Tumor size (less BCS in T3/4)
- These results call for a clear consensus on the role of BCS in patients responding to neoadjuvant therapy. This will translate the progress in neoadjuvant therapies into improved breast conservation rates

Acknowledgements

Groups, Sites and Patients

Study Principal Investigators: J. Baselga and H. Eidtmann

BIG GROUPS

BrEAST

GBECAM

GECO PERU

German ALTTO

(AGO BREAST, GBG,
NOGGO, SUCCESS, WSG &
indep. sites)

IBCSG

NBCG

NCIC-CTG

SOLTI

TCOG

Other GROUPS

FNCLCC

KCSG

Independent Sites

45

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